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Optimization of a novel process for preparation of silicon carbide Foams.

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Highlights:

- High alumina bonded 80 mass% SiC ceramics are prepared by foaming method
- Foaming of SiC slurry occurs by two gases produced from CaC₂/Al reaction.
- Optimum condition (1% CaC₂, 3.3 CaC₂/Al ratio, 30 %H₂O and 0.8% by mass stabilizer)
- SiC specimens of 65 to 70% open porosity and <25μm mean pore size are obtained.
- Using coarse SiC and low firing temperature decreases the cost.

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